

Intrinsic Valuation of Brown-Forman Class B Shares

An Honors Thesis (Honor 499)

By

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Signed

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Abstract

There are a number of individual factors that go into influencing the stock market as a whole, and on a relative scale each individual stock. Trying to analyze a large amount of these factors and determine their impact on Brown-Forman Class B shares was a largely subjective task that we tried to do with utmost accuracy. Utilizing a number of industry standard-valuation formulas along with looking at the company's 10-K statement gave the most insight into Brown-Forman. This information was then analyzed and factored into giving the company an accurate valuation from the subjective and objective facts that were accumulated. From here a hold recommendation was made for the company as a solid investment based upon its past performance and the sector it resides in. Brown-Forman has a lot of potential upside and is a solid dividend stock for an investor. The paper goes into further detail for the rationale and techniques used in coming to this decision.

Acknowledgements

First off I want to thank Michael Shawd and Jonathan Ridge for all of the hours put in on this project with me. The late nights and early morning we all had were worth it to reach a final product of this caliber. Secondly I would like to thank Professor Kris Kemper and Tom Heck for helping us out on this project and giving us guidance. It was a lot of fun to take the things we learned from Professor Kemper's class and put them into practice.

Ball State University – Student Research

Consumer Staples Sector, Alcoholic Beverage Industry

New York Stock Exchange

Brown-Forman Corp.

Date: 1/27/2016
Ticker: NYSE: BF.B

Current Price: \$92.75
Headquarters: Louisville, KY

Recommendation: Hold
Target Price: \$90-\$95

This report was produced by students of Ball State University and is intended for educational purposes only.

Return on \$10,000 Investment



Market Profile

Closing Price 1/27/16	92.75
52-Week Low / High	\$86.71 / \$111.06
Average Volume (10 Day)	629,459
Diluted Shares Outstanding	116.8M
Market Cap	11.4B
Dividend Yield	1.39%
Beta	0.78
ROA	15.95
Institutional Holdings	48%
Insider Holdings	3.66%

Sources: Charles Schwab and Nasdaq

Valuation	HPR	MM	FCF
Est. Price	\$107.36	\$97.39	\$74.41
Weights	0.333	0.333	0.333
Target Price	\$ 93.05		

Source: Team Estimations

Company Highlights

Based upon our thorough valuation of Brown-Forman Corp. (BF.B), our team initiates coverage with a **Hold** recommendation. With a target price of **\$90-\$95** and its consistent history of dividend payouts, we believe Brown-Forman to be accurately valued as of its closing price on January 27, 2016.

- **Expected Growth in Net Sales** - Brought about by premium product offerings, an improving product line, and heavy investment in the Jack Daniel's brand, we anticipate a continued growth in after-tax revenues throughout the foreseeable future. With Brown-Forman continuously introducing new products to both domestic and international markets, we perceive that they will continue on the track of long-term, sustainable growth.
- **Global Expansion** - Brown-Forman has experienced a 17% increase in revenue from international markets in the last 15 years. With nearly 57% of Brown-Forman's sales being derived from international markets last year, we expect management to take action in ways that will grant B-F steady increases in market share for many years to come.
- **Valuation** - By utilizing three different valuation methods, we arrived at Brown Forman's intrinsic value of \$90-\$95. This indicates that B-F appears to be adequately valued within the marketplace based upon our team's estimated future revenue, growth expectations, and cash flows for the company.
- **Primary Reasons for Concern** - Unfavorable foreign exchange rates and potential increases in excise taxation pose a significant degree of concern to potential investors for multinational companies operating within the distillers and vintners sub-industry

Recent Company News

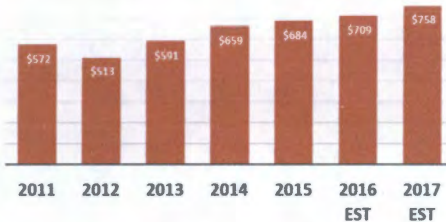
- **Brown-Forman Authorizes \$1 Billion Share Repurchase and Dividend**
- 1/28/16: Brown-Forman has commenced a new share buyback program that replaces the old one expiring on March 24th of this year. This plan to return cash to stockholders is coupled with their regular quarterly cash dividend of \$0.34 per share on Class A and B stock.
- **Brown-Forman Selling Tuaca and Southern Comfort to Sazerac**
- 1/14/16: Brown-Forman has agreed to sell Tuaca and Southern Comfort to Sazerac for \$544 million to focus the company's resources on products deemed more in line with the company's future plans.
- **Brown-Forman Reports Strong Underlying Financial Second Quarter**
- 12/2/15: While reported net sales declined 4%, on an underlying value they increased by 5%. The foreign exchange currency rate has greatly impacted the company. The company and CEO Paul Varga also reiterated a full-year growth outlook.

Key Financials and Ratios	2012	2013	2014	2015	2016 Est	2017 Est
Total Revenues*	2723	2849	2991	3134	3127.1	3289.4
Gross Profit*	1795	1955	2078	2183	1676.1	1767.5
Operating Income*	788	898	971	1027	1059.2	1125.2
Net Income	513	591	659	684	709.4	757.6
Operating Margin	▼ 28.9%	▲ 31.5%	▲ 32.5%	▲ 32.8%	▲ 33.9%	▲ 34.2%
Profit Margin	▼ 18.8%	▲ 20.7%	▲ 22.0%	▲ 21.8%	▲ 22.7%	▲ 23.0%

*Numbers in Millions

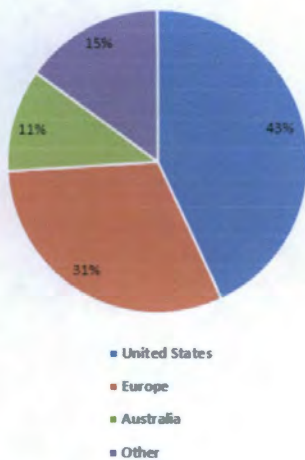
Business Description

Net Income (shown in millions)



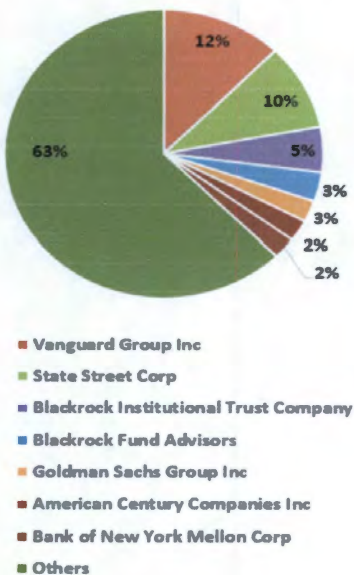
Source: Company Data

Percent of Fiscal 2015 Net Sales



Source: Company Data

Shareholder Structure



Source: Company Data

Brown-Forman Corp. (BF.B) holds longstanding tradition dating back to 1870. Headquartered in Louisville, Kentucky, Brown Forman manufactures, bottles, markets, and sells premium alcoholic beverages. Built upon its flagship brand, Old Forester Bourbon Whiskey, Brown-Forman is a world-leading American distiller & vintner. Due in part to their premium brand image along with their global footprint, the company contains significant market share brought about by a number of brands, including Jack Daniel's Tennessee Whiskey and Woodford Reserve.

Holding fast to its family heritage, Brown-Forman Corp. remains true to their values by maintaining a large family presence while being actively involved in responsibly developing and marketing a line of premium, traditional alcoholic beverages. In an effort to secure a long-lasting family presence, B-F is composed of a dual class stock structure - Class A and Class B. Class A shares, which include voting rights, are largely owned by members of the Brown family leaving Class B shares to be obtained by outside investors.

With a reach spanning 160 countries, Brown-Forman Corp. derived 57% of fiscal year 2015 net sales from emerging markets. The company has experienced a significant increase in international sales throughout recent years, and we highly anticipate that this trend will remain constant over the longer term.

Brown-Forman Corp. has maintained a continuous 7% growth rate since 1956 leading to an 8% increase in net sales in fiscal year 2015.

Brands

While Jack Daniel's is Brown-Forman's most widely recognized brand, 31 other lines of wines and spirits fill up the rest of B-F's portfolio. However, B-F recently agreed to sell their Southern Comfort brand and Tuaca Liqueurs to Sazerac for \$543.5 million. This selloff is part of a strategy to prioritize Brown-Forman's heritage brands such as Jack Daniels and Woodford Reserve. .

Markets

Brown-Forman products are currently available for purchase in more than 160 countries across the globe. Originating in the United States, B-F obtains the majority of their sales from the U.S., Australia, the United Kingdom, Mexico, and Germany. While their success within the Americas is apparent, the leadership at Brown-Forman recognized the potential upside to expanding their international presence. Due in part to this expansion, the company has experienced a 17% increase in international revenues throughout the past 15 years.

Distribution Network

In order to succeed within the distillers and vintners sub-industry, an effective distribution network is imperative, and this is even more apparent for companies pursuing business within the global markets. For year-end 2015, Brown-Forman generated 43% of net sales from the United States, leaving the remaining 57% to be gleaned from international consumers. While these numbers are positive, we perceive that the company's efforts to enhance their international distribution strategy is a point of interest considering that they account for a mere 1% of the world's spirits market. The United States generally does not allow spirits and wines to be sold directly to the consumer; therefore, Brown-Forman sells their products to distributors or state governments that directly control the sale of alcohol.

With a strategy for global expansion set in place to further discover emerging markets, it is expected that management will seek out strategic partnerships and acquisitions that already possess a foothold within their desired market. However, Brown-Forman currently utilizes a company-owned distribution system that enables them to move goods through the use of wholesalers and retail locations

Strategy

- **Keep the Jack Daniel's brand strong and healthy** - Jack Daniel's is Brown-Forman's most valuable brand and B-F intends to continue to grow and expand Jack Daniel's Tennessee Whiskey in the future. In recent years, B-F has been able to release new flavors of Jack Daniel's to their consumers such as Tennessee Honey and Tennessee Fire. These brands offer new tastes to consumers while still holding on to the premium Jack Daniel's Whiskey label. Gentleman Jack, another line of Jack Daniel's products, is a more expensive but higher quality whiskey that appeals to consumers who are eager to spend a little extra on an even more premium product.
- **Continue global expansion of brands** - Brown-Forman reeled in more than half of its revenue from global sales last year and intends to keep growing their premium whisky brands overseas. The main target markets overseas include Poland, Russia, and other parts of Eastern Europe. Jack Daniel's will continue to be the company's prize asset and will remain a main focus when pushing their brands to consumers in new markets. Brown-Forman has experienced a hefty 17% increase in revenue from international markets throughout the last 15 years. Looking to gain market share in the Irish Whisky industry, Brown-Forman recently purchased Slane Castle Irish Whisky Limited.

Management & Governance

Board Member	Independence	Tenure
Joan C. Lordi Amble	Yes	5
Patrick Bousquet-Chavanne	Yes	11
Geo. Garvin Brown IV	No	10
Martin S. Brown, Jr.	No	10
Stuart R. Brown	No	1
Bruce L. Byrnes	Yes	6
John D. Cook	Yes	8
Sandra A. Frazier	No	10
Augusta Brown Holland	No	1
Michael J. Roney	Yes	2
Michael A. Todman	Yes	2
Paul C. Varga	No	13
James S. Welch Jr.	No	9

Source: Company Proxy Statement

Since members of the Brown family own a majority of the Class A voting shares, the company is considered a controlled company and is exempt from a number of standards such as having: a fully independent nominating and corporate governance committee, a fully independent compensation committee, and a majority of independent directors. This last note allows them to place shareholders that are members of the family on the board of directors. (Appendix B)

The company voluntarily decided it was in their best interest to name a number of independent directors on their board. They also have an entirely independent compensation and nominating/corporate governance committee. (Appendix C) To reflect the Brown family's controlling share they currently have placed Geo. Garvin Brown as the Chairman to actively promote the family's interest. This allows CEO Paul Varga the ability to focus on how the corporation is ran while still having his input on the board and its executive committee. (Appendix A)

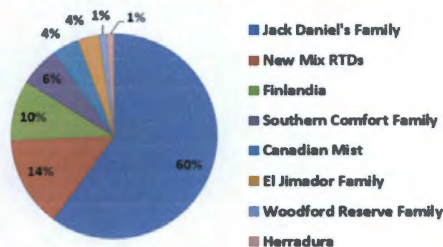
In further analyzing the company's proxy statement we noticed a number of noteworthy findings. First was the amount of committee meetings. The audit committee met a total of 13 times throughout fiscal year 2015, which seems like an adequate number of opportunities to review any issues that have come up. They also adhered to the NYSE's rules on having an entirely independent compensation committee.

Industry Overview & Competitive Positioning

Demand Drivers

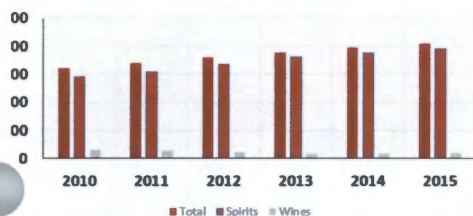
As with any thriving company, the ability to identify industry drivers, determine how these drivers affect the industry, and set it place a strategy in order to mitigate the impacts of these drivers is vital. With this in mind, it is imperative that Brown Forman maintain a watchful eye on a few key factors. These being, expansion into emerging markets, ensuring effective branding, strong distribution channels, and an increase in per capita income

Nine-Liter Cases (shown in millions)



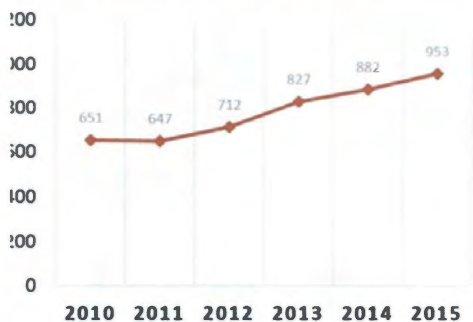
Source: Company Data

Alcoholic Drinks Manufactured (shown in millions)



Source: Company Data

TOTAL BF INVENTORY



Source: Company Data

• Increasing Globalization

While Brown-Forman is currently supplying products to consumers across the globe, it is essential that major competitors within this industry set in place a strategy that will enable them to continue expansion throughout these profitable emerging markets. In 2015, foreign markets accounted for 56.5% of all revenues. For fiscal year end 2015, B-F reported a 9% growth in net sales throughout emerging markets, a stark contrast to number of direct industry competitors. With regards to developed markets outside the United States, a 4% growth in net sales was recognized. With their commitment to innovation and premiumization, B-F maintained momentum as they announced global market share gains for the fourth consecutive year.

• Effective branding

In the distillers and vintners sub-industry, the ability to effectively communicate with end users is essential. This element is perhaps the one component that separates the industry's top brands from those holding middle ground. Though most beverage brands are already well-established and maintain an adequate market presence, innovative advertising campaigns are necessary to keep their existing customer base while also appealing to prospective new buyers.

• Shifting Societal Perspectives

Alcoholic beverages typically carry with them perhaps a contentious societal perspective. Though society appears to continuously become more accepting of spirits, there have been and will always be negative effects brought about by irresponsible consumption on behalf of those underage, automobile operators, and those suffering from alcoholic beverage dependency. As of December 2015, the average American household income had increased by 0.3% following a 0.4% increase in November. An empowered degree of consumer spending can be attributed to a steady increase in non-farm payrolls, reduced oil prices, and an increasing degree of home-equity.

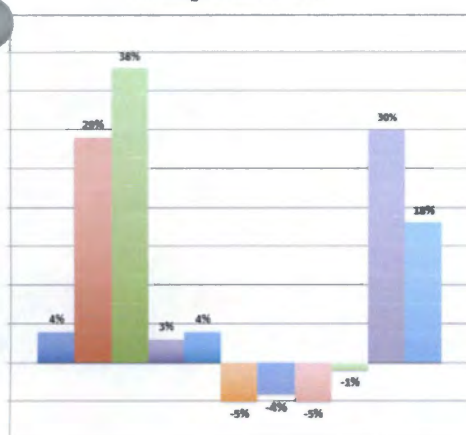
Industry Restraints

The high degree of competition amongst the industry's large competitors possess a certain degree of risk. This competitive environment leaves the threat of new entry and creates an opportunity for new players to enter the marketplace. Other existing industry restraints include readily available substitutes, the increasing cost of necessary raw materials, and the many government regulations and excise taxes imposed on those operating within this unique marketplace.

Industry Supply

As with most industries, the distilleries industry is highly dependent on its suppliers. Due to the fact that all spirits are entirely reliant on various raw materials including malted barley, corn, yeast, and peat; all of which have no substitutional goods. In a space as traditional as the distillers and vintners sub-industry, consistent production is key to maintaining a long-lasting brand presence. Without an exact and precise method of production along with consistent inputs, Brown Forman would be providing a varying consumer experience and the Jack Daniel's or Old Forester names would mean nothing. In this case, the distillers are heavily reliant and subjected to the demands of suppliers because the suppliers of these raw materials are not solely reliant on the distilleries industry for their inventory movement.

% Change in sales vs 2014



■ Jack Daniel's Tennessee Whiskey

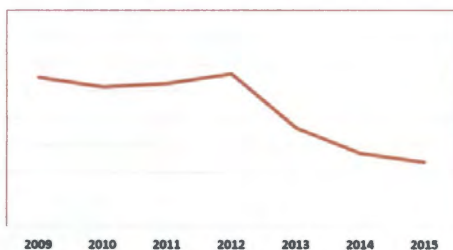
■ Jack Daniel's Tennessee Honey



■ Herradura

- 0 - No Threat to BF
- 1 - Insignificant Threat to BF
- 2 - Low Threat to BF
- 3 - Moderate Threat to BF
- 4 - Significant Threat to BF
- 5 - Major Threat to BF

Inventory Turnover



Source: Team Estimates

Availability of Substitutes

The availability of substitutes remains perhaps one of the largest forces affecting this industry. While non-alcoholic beverages play a large role in the availability of substitute goods, the bigger threat comes from the beer and wine industries by providing alcoholic beverages comparable in nature with a reduced level of alcohol content. Additionally, beer and wine also have a fewer government regulations placed upon them thereby enabling them to advertise in places where hard liquors cannot. Coupled with a decreased level of cultural acceptance, the spirits industry faces a greater exposure to these risks. Beer and wine are also often available at a reduced price point, making them viable options for those not looking to pay for a premium beverage.

Imposed regulatory influences

Brought about by increasing taxation and regulation, spirits manufacturers are highly sensitive to changes affecting both policy and tax. In total, producers of alcoholic beverage producers are exposed to excise, sales, value added, and corporate taxes; all of which directly impact the company's bottom line.

Market Segmentation

As the result of our research, we found that the alcoholic beverage industry is separated into four distinct geographic market segments: North America, Europe, Asia-Pacific, and the Rest of the World (RoW).

Mature Markets

Brown Forman's mature markets are composed of countries throughout the Americas and Europe. The Americas have experienced a high degree of market competition due to the widely accepted beer and wine suppliers which compose the alcoholic beverage industry's largest players. Of spirit consumption throughout this Americas, Canada and Brazil have proved to be sources of high whisky consumption.

With regards to Europe, the existing cultural acceptance and different societal viewpoints allow for lower minimum age laws pertaining to alcohol consumption thereby bolstering revenues. With an estimated 47% of European citizens between the ages of 18-24 regularly consuming alcoholic beverages along with 76% of those between 25-44 years of age, we anticipate that this market will be a cash cow for many years to come. It is noteworthy that recent turbulence within the European economy should remain under constant monitoring as abrupt changes could hinder the levels of disposable income contained within Brown-Forman's target market.

Emerging Markets

Within Brown Forman's emerging markets, the Asia-Pacific has consistently remained the fastest growing market for those within the distillers and vintners sub-industry. China and India appear poised to offer unparalleled growth resulting in a greater degree of manufacturer concentration. China's developing market has multiplied four times throughout the past decade, and we anticipate that this trend will continue. A surprising 88% of alcoholic beverage consumers throughout India regularly consume distilled spirits, most notably whisky.

Expected Growth

The distilleries industry is uniquely positioned due to its ability to maintain growth regardless of the economy's condition. More often than not, consumers will continue to drink their favorite distilled spirit in both the good times and bad. In times of economic growth it can be consumed in a celebratory manner in clubs, bars, and various other locations. On the contrary, in times of economic contraction, people will often recognize the inevitable markups placed upon premium spirits at public venues and opt to drink their favorite beverage in the comfort of their own home. However, in recent years, data proves that the economy's current standing has equipped consumers with increased levels of

disposable income thereby increasing the consumption of premium beverage spirits across the board.

International competitors are engaged in heavy investments in marketing and advertising to ensure customer loyalty. Growth was moderately paced but has increased due to a growing consumer base, fueled by a younger generation with an increased level of disposable income.

Porters Five Forces

• Supplier Power

B-F relies heavily on their suppliers for ingredients and materials to produce their final products including glass and wood, as well as the ingredients necessary to distill their liquors. Surprisingly, water is one of the most important ingredients to B-F. With this in mind, severe droughts could potentially make it tough to acquire high quality water. We gave the supplier power a rating of 4.

• Buyer Power

Social attitudes and reputation play a large role in consumer's decision to purchase alcohol. It is well known that health can be negatively impacted by the continuous consumption of alcohol. Brown-Forman tries to maintain a positive reputation with its consumers by encouraging them to drink responsibly. We gave buyer power a rating of 4.

• Threat of New Entries

In more recent years the threat of new entry into the alcoholic beverage industry has increased. In the year 2000 the number of craft distilleries in the U.S. was 24 compared to 550 in 2014. Local breweries and distilleries are becoming more popular and taking up a sizeable portion of the market share. However, it would not be considered easy to enter into the alcoholic beverage industry due to government regulations and liquor laws. We gave the threat of new entries a rating of 2.

• Threat of Substitution

There are many different substitutions for Brown-Forman's products. Some consumers are loyalists to a particular spirit or brand. Jack Daniel's is B-F's primary asset, and if consumers choose a different whisky to substitute it with the negative impact could be devastating to Brown-Forman. We gave threat of substitution a rating of 4.

• Competitive Rivalry

Brown-Forman has unique brands and within those brands, unique tastes. In the alcoholic beverage industry there are many unique and different products and tastes. Companies are often trying to rival other companies with similar tastes and products to compete within the market. This gives B-F a rather low competitive advantage. We gave competitive advantage a rating of 2.

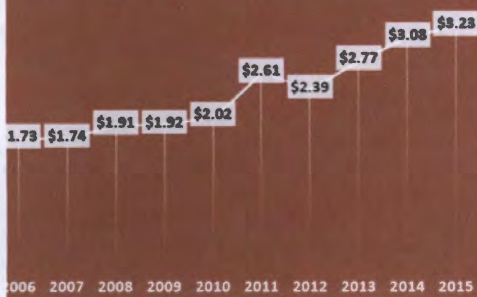
Investment Summary

Merits:

• Strong Product Portfolio

As a major manufacturer and merchandiser of premium spirits, Brown-Forman has constructed a product portfolio of globally recognizable brands. Ranging from Jack Daniel's Tennessee Whisky and Woodford Reserve all the way to Finlandia Vodka, Brown-Forman boasts a product profile of many popular spirits. Our team anticipates a continued focus on product innovation, pricing, and premium branding while also expanding their operations throughout the world's emerging markets in an effort to bolster their existing level of operational performance while simultaneously enhancing their market share.

BASIC EARNING PER SHARE



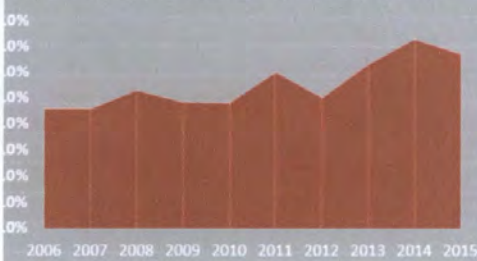
Source: Company Data

Return on Average Invested Capital



Source: Company Data

Return on Average Stockholders' Equity



Source: Company Data

- **Ongoing Globalization Efforts**

Brown-Forman executives have expressed a great degree of commitment to expanding the reach of their pre-existing product line throughout the world. This two-pronged approach will take place on two different fronts. The first being through the continued acquisition of market share throughout developed markets such as the United States and France while also taking steps to increase their foothold within emerging markets like Mexico and Russia where whiskeys are in their early stages of development. In addition, B-F recently invested \$50 million to enter the fast-growing Irish Whisky category through the purchase of all existing Slane Castle Irish Whisky shares. The new facility is slated to begin operations in late 2016.

- **Proven Track Performance**

Brown-Forman has proven their commitment to their long-standing strategy. While many of their competitors appear to process a steady number of buyouts, B-F tends to limit acquisition activity and capital expenditures and in place return hefty sums to investors by means of dividends and share repurchases.

Concerns:

- **Foreign Exchange**

Brown-Forman's reach spans throughout 160 countries across the globe. Consequently, they are continuously exposed to any currency fluctuations taking place within the marketplace. Even though we anticipate continued stability on part of B-F, currency headwinds will continue to persist.

- **Regulatory Concerns:**

Operating within the spirits industry innately exposes the company to a high degree of subjugation to prevailing regulatory bodies. With fiscal pressures mounting throughout the United States and Europe, an increase in excise taxation always remains within the realm of possibilities. If imposed, additional excise taxes would undoubtedly impact their financial performance negatively.

Financial Analysis

Overview

For our financial analysis we looked at records from the year 2011 and forward because we felt it gave us adequate knowledge of trends that were taking place within the company and the industry as a whole.

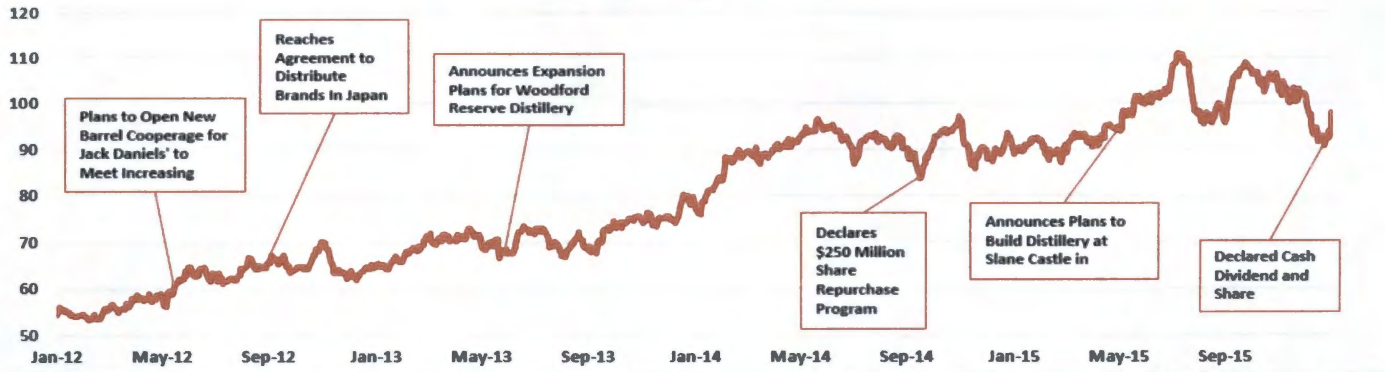
Cash & Liquidity

B-F cash holdings have steadily decreased since 2011. This change can be reflected in Brown-Forman's expansive decisions to purchase properties such as the Slane Castle in Ireland as well as the undertaking of domestic projects such as the stave and heading mill in Spencer, IN. Low cash ratios indicate that Brown-Forman is investing in new projects to continue to grow inside and outside the United States. Liquidity ratios however have decreased in recent years making it harder for Brown-Forman to reach their short-term financial obligations.

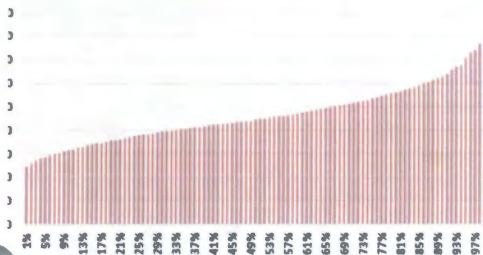
DuPont Analysis:

We broke down Brown-Forman's return on equity (ROE) to see what was generating the majority of their return on equity. B-F's return on equity is at 37.32%. ROE is broken down into return on assets and the equity multiplier. B-F's ROA is almost 17% and their equity multiplier is 2.2, which means they are generating most of their ROE from return on their assets. Further breaking down ROA, B-F has a similar profit margin to their competitor Diageo. This implies that their ROA is superior due to their total asset turnover. B-F's TAT is roughly 75% and Diageo's TAT is an estimated 42%. We concluded that Brown-Forman's ROE is mainly driven by their ability to turn assets into a profit. (Appendix F & G)

BF/B Stock Prices and News



Monte Carlo Analysis



Source: Team Estimates

Financial Condition	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Profitability						
EBITDA Margin	31.15	35.23	30.74	33.31	34.14	34.40
Operating Margin	28.76	33.06	28.94	31.52	32.46	32.77
Net Profit Margin	18.19	22.12	18.84	20.74	22.03	21.83
Return on Common Equity	24.14	28.93	24.85	31.97	36.01	34.75
Liquidity						
Current Ratio	2.80	2.79	4.33	3.85	3.88	2.35
Cash Ratio	0.42	0.80	0.84	0.43	0.78	0.39
Activity						
Accounts Receivable Turnover	6.29	5.66	5.61	5.57	5.36	5.44
Total Asset Turnover	1.32	1.33	1.37	1.16	1.07	1.04
Financial Leverage						
Long-Term Debt to Assets	15.02	13.58	14.47	27.50	24.30	17.84
Long-Term Debt to Equity	26.81	24.47	24.31	61.24	49.07	39.27
Total Debt to Equity	36.89	36.84	24.65	61.55	49.46	62.36
Financial Leverage	5.23	29.14	-8.72	15.87	11.27	4.90
Shareholder Ratios						
FFO Per Share	6.60	8.97	7.77	0.10	5.74	2.21
Dividend Payout Ratio	0.79	1.49	0.89	4.98	1.09	1.21

Valuation

Overview:

We used three different models to value Brown-Forman; the holding period return, free cash flow, and market multiples valuation techniques. These returned three estimates that resulted in a range from \$90-\$95 for our team's estimated intrinsic value of the stock.

Holding Period Return

This model was calculated by taking the most recent dividend and estimating a growth rate to give us a future expected dividend three years from now. We derived an estimated P/E ratio from Bloomberg for three years in the future, multiplied by the estimated EPS three years in the future to give us a price. This was added to the third year dividend and discounted back along with dividends from year 1 and 2. The HPR model gave us a stock price of \$107.36. (Appendix E)

Free Cash Flow

We developed a free cash flow model by taking cash flows from 2010 to 2015 to find a growth rate. This growth rate of 1.91% was used to give us a future free cash flow estimate. We then took this value and discounted it to give us the present value of all future cash flows. We subtracted debt and cash and cash equivalents, which were found on financial statements of B-F, to give us an estimated market cap. This value divided by outstanding shares gave us an estimated price of \$74.41 (Appendix E)

Market Multiples

This valuation was completed by taking several key ratios from close market competitors including: P/E of the trailing twelve months, a forward looking P/E ratio, market to book ratio, price to FCF, and price to sales. These were compared to Brown-Forman's trailing twelve-month EPS, forward looking EPS, book value, FCF, and sales. The MM model gave us a stock price of \$97.39. (Appendix E)

WACC

The capital asset pricing model was used to determine the cost of equity for Brown-Forman. For a risk free rate we used the returns of the 10-year government issued bonds, which provided returns of 2.24%. For our beta calculation we used five-year monthly returns of Brown-Forman vs. the returns of the S&P 500, which gave us a beta of .78. A market risk premium of 6.28% was used to calculate the cost of equity at 5.40%. The after-tax cost of debt was calculated to equal 3.42%. The weight of debt was found by taking the book value of debt and dividing it by the market value of equity plus the book value of debt. Brown-Forman is heavily financed by equity. This gave us a WACC of 5.23%. The average weighted average cost of capital in the alcoholic beverage industry is 7.05%. (Appendix D)

Investment Risks

Foreign Market Impact:

With foreign markets counting for over 57% of Brown-Forman sales there are a large number of circumstances that can have positive or negative impacts on the company. One such circumstance is the growth of a number of emerging markets overseas. Since they are still growing there can be a number of distribution factors that haven't been addressed yet. If something were to happen in getting Brown-Forman product to the consumer, it would have a largely negative impact. Another large factor is the ever-fluctuating foreign exchange rate. The company does its part in hedging against these fluctuations, but in the long-term this can only do so much. They have hedged 70% of their fiscal 2016 with foreign currency forward contracts and will assess in the future where they financially stand with this position.

Lack of Independence within the Board of Directors:

Since the company is considered a "controlled company" under NYSE listing standards due to the Brown Family's ownership percentage, they are not required to follow a number of rules. These include having a majority of independent directors, a fully independent nominating/corporate governance committee, and a fully independent compensation committee. They have utilized these exemptions with the independent directors and governance committee, but have opted to maintain a fully independent compensation committee. This lack of independence overall on the board ensures that the Brown family has full control over the company's direction. This can be worrisome to investors because there is little oversight they have in making decisions and there are only 6 of 13 directors that are independent. If the investor's ideas match up with the Brown family it can be a good investment, but if not there is little they can do to impact it.

Failure to Anticipate Demands:

Due to the highly competitive nature of the alcoholic beverages sector, accurately anticipating the needs of consumers is what leads to a successful brand. Thus far, Brown-Forman has done so with a number of their products, such as Woodford Reserve's recent success and the overwhelming positive feedback from both Jack Daniel's Tennessee Honey and Fire Whiskey. Due to the long holding period that is required in creating whiskey, accurately anticipating years in advance is both an art and a science. They must also actively appeal to their existing consumers as well as the 21-25 year-old age group that is constantly producing new consumers. Turning the new generation onto Brown-Forman products instead of other alcoholic beverages or other direct whiskey competitors is what has potential to greatly impact Brown-Forman in an adverse fashion.

Acquisitions and Dispositions:

Since there is a vast competitor base in the alcoholic beverage industry Brown-Forman may acquire or sell off certain brands. In these decisions, they must decide whether the new brand meets both their strategic company goals and also their growth requirements. If they do not, Brown-Forman will either choose not to acquire them or will be required to sell them off. Such was the case when they recently sold Southern-Comfort and Tuaca as they fell out of line with the standards the company desires their holdings to meet.

Appendix A: Key Executive Summary

Executive	Title	Brown-Forman History	Details
Paul C. Varga	CEO	<ul style="list-style-type: none"> Appointed CEO August 1, 2005 Member of the board since 2003 Appointed company chairman in August 2007 Previously Senior VP and Chief Marketing Officer from 2000-2005 	Varga was appointed CEO in August 2005 and company chairman in 2007. Prior to this he was the Senior VP and chief marketing officer where he informed the company's executives on BF Beverages' international and domestic marketing plans. His ascent up the ladder started in the company began as an intern in 1986. His role places him responsible for the company's strategy, operations, and performance.
James S. Welch Jr.	Vice Chairman	<ul style="list-style-type: none"> Executive Director of Corporate affairs, Strategy, and HR since 2007 Head of Strategy and HR from 2003-2007 Executive Director of HR from 1999-2003 Joined Brown-Forman in 1989 	Welch Jr. currently is responsible for strategic planning, HR, and the internal Business Consulting Group within BF. He is responsible for many employee related functions, like staff development, compensation, benefits, and hiring across the country. Prior to his tenure at BF he co-founded and was VP of Source Air Corporation. He also worked for J.P. Morgan & Co., working his way up to VP in 1986.
Mark McCallum	Executive VP/President Jack Daniel's	<ul style="list-style-type: none"> Executive VP since 2006 Executive Leadership Team President of Daniel's Brands since February 2015 President of European Division 2013-2015 COO from 2009-2012 Chief Brand Office 2006-2009 	McCallum has been part of BF's management since coming to the company in 2003. His numerous roles have served the company well and have continually moved him up the ladder. Prior to BF he had 25 years of management, marketing, and sales experience
Jane Morreau	Executive VP and CFO	<ul style="list-style-type: none"> Executive VP and CFO since February 2014 Chief Production Officer 2013-2014 Chief Accounting Officer 2008-2013 Vice President since 1997 	Morreau has been with BF since 1991 and been in management since 1997. Her wide roles in the financial aspect of the company have been what continually lead to her promotions. Prior to working at BF she worked the KFC Corporation (now Yum! Brands).

Sources: Company Website and BloombergBusiness

Appendix B: Board Member Overview

Board Member	Member Since:	Background	Other Boards
Joan C. Lordi Amble*	2011	Retired-Previously worked at American Express as Exec VP and CFO and COO at GE Capital Markets	Zurich Insurance Group, Booz Allen Holding Corporation, Sirius XM Radio, Broadcom
Patrick Bousquet-Chavanne*	2005	Executive Director of Marks and Spencer Group PLC. Also previously worked at Yoostar Entertainment Group	Marks and Spencer Group PLC, HSNi Corporation
Geo. Garvin Brown IV (Chairman Of the Board of Directors)	2006	Chairman of Board since 2007. Brown Family Director.	None
Martin S. Brown Jr.	2006	Attorney at Adams & Reese LLP since 2005. Brown Family Director.	None
Stuart R. Brown	2015	Managing partner at Typha Partners, LLC. Brown Family Director	None
Bruce L. Byrnes*	2010	VP of Proctor & Gamble (2002-2008) and worked there for 38 years	Boston Scientific Corporation, Cincinnati Bell, Inc., Diebold, Incorporated
John D. Cook * (Lead Independent Director)	2008	Director at Emeritus, McKinsey & Company. Previously worked management at P&G and The Kellogg Company	None
Sandra A. Frazier	2006	Founder and Partner, Tandem Public Relations LLC. Brown Family Director	Al J. Schneider Company, Glenview Trust Company, Commonwealth Bank and Trust Company
Augusta Brown Holland	2015	Founding partner at Haystack Partners LLC. Brown Family Director	None
Michael J. Roney*	2014	CEO of Bunzl PLC since 2005.	Bunzl PLC, Johnson Matthey PLC
Michael A. Todman*	2014	VP Whirlpool Corporation. Previously President of Whirlpool International and Whirlpool North America	Whirlpool Corporation, Newell Rubbermaid, Inc
Paul C. Varga (Company Chairman and CEO)	2003	See Key Executives Summary	Macy's Inc
James S. Welch Jr. (Vice Chairman & Exec. Director of Corporate & Civic Affairs)	2007	See Key Executives Summary	None

*-Independent Director

Sources: 2015 Proxy Statement

Appendix C: Board of Directors Committee

Audit Committee	Title
Joan C. Lordi Amble	Chairperson
Bruce L. Byrnes	Member
Michael A. Todman	Member
John D. Cook	Member
Compensation Committee	Title
Patrick Bousquet-Chavanne	Chairperson
Michael J. Roney	Member
Joan C. Lordi Amble	Member
John D. Cook	Member
Corporate Governance and Nominating Committee	Title
John D. Cook	Chairperson
Patrick Bousquet-Chavanne	Member
Geo. Garvin Brown IV	Member
Bruce L. Byrnes	Member
Executive Committee	Title
Geo. Garvin Brown IV	Chairperson
Paul C. Varga	Member
James S. Welch Jr.	Member

Appendix D: WACC Analysis

WACC Analysis	
Risk Free Rate	2.24%
Beta	0.781893
Market Risk Premium	6.28%
Cost of Equity	5.40%
Cost of Deb	5.00%
Effective Tax Rate	31.70%
After tax cost of debt	3.42%

	Weight	Cost	Weighted Cost
Debt (after tax)	8.31%	3.42%	0.28%
Equity	91.69%	5.40%	4.95%
WACC			5.23%

Appendix E: Valuation Models

Holding Period Return Model

D0	1.21
D1	1.35
D2	1.50
D3	1.67
P3	103.018
G1	11.24712
k	5.23%
EPS3	3.80
P/E3	27.11
NPV	\$107.36

DCF Free Cash flow	
FCF0	571
FCF1	568.25
G	1.91%
WACC	5.23%
PV(FCF)	17087.86
Debt	1188
MIN int	0
C&CE	370
Market cap	15529.86
Shares	208.7
E(P)	\$ 74.41

Average of Valuations

\$ 93.05

Market Multiples

	DEO	BUD	Average
P/E (ttm)	21.3	21.91	21.605
P/E (forward)	19.8227	24.03341	21.9280
M/B	6.490	3.99	5.238
P/FCF	25.01	21	23.005
P/Sales	26.57176	4.694526	15.63314

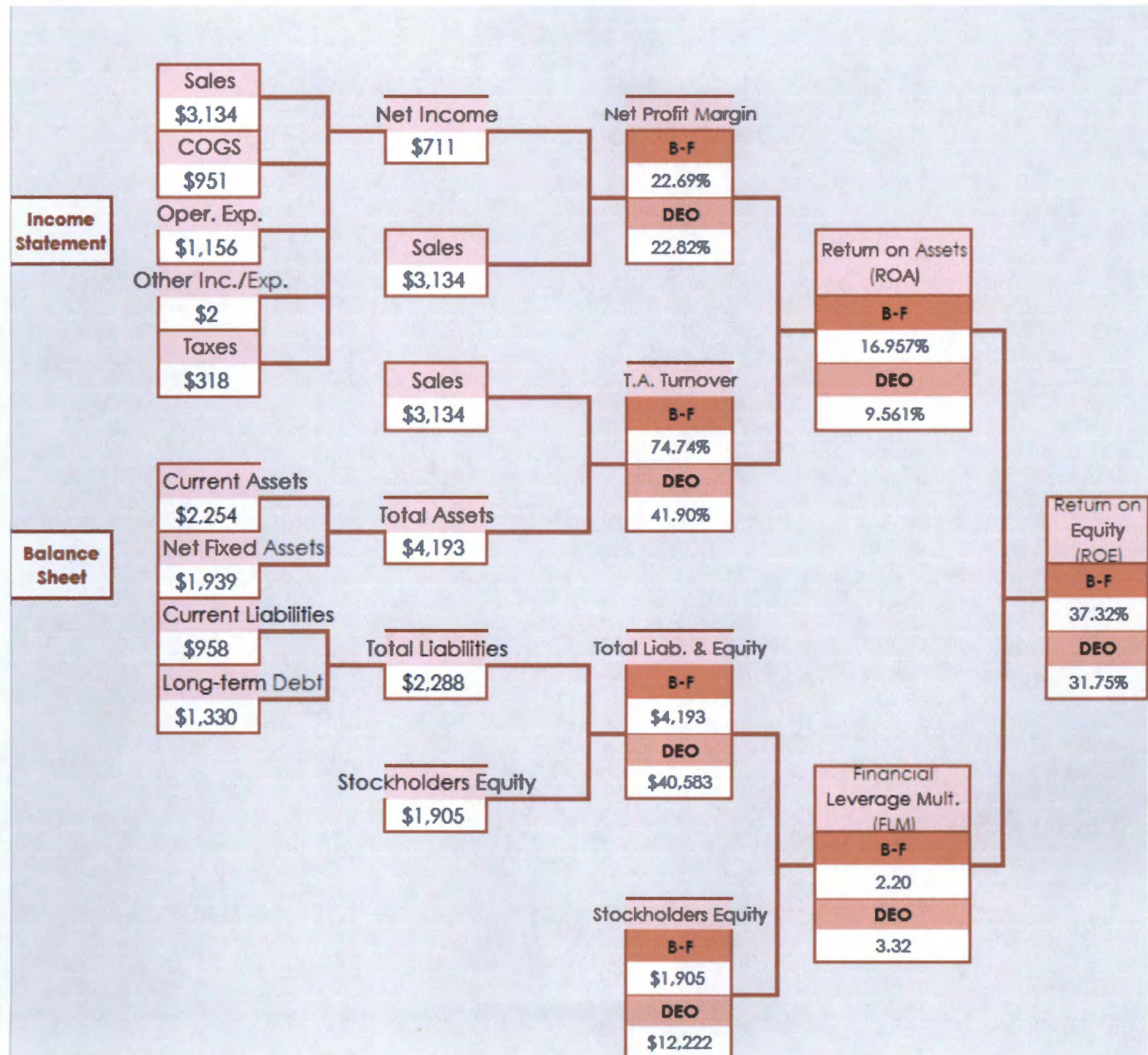
BF/B

EPS(ttm)	3.25	70.21625
EPS(forward)	3.207	70.3232
Book Value	8.266744	43.29831
FCF	3.06	70.3953
Sales	14.88455	232.6922
Price		\$ 97.39

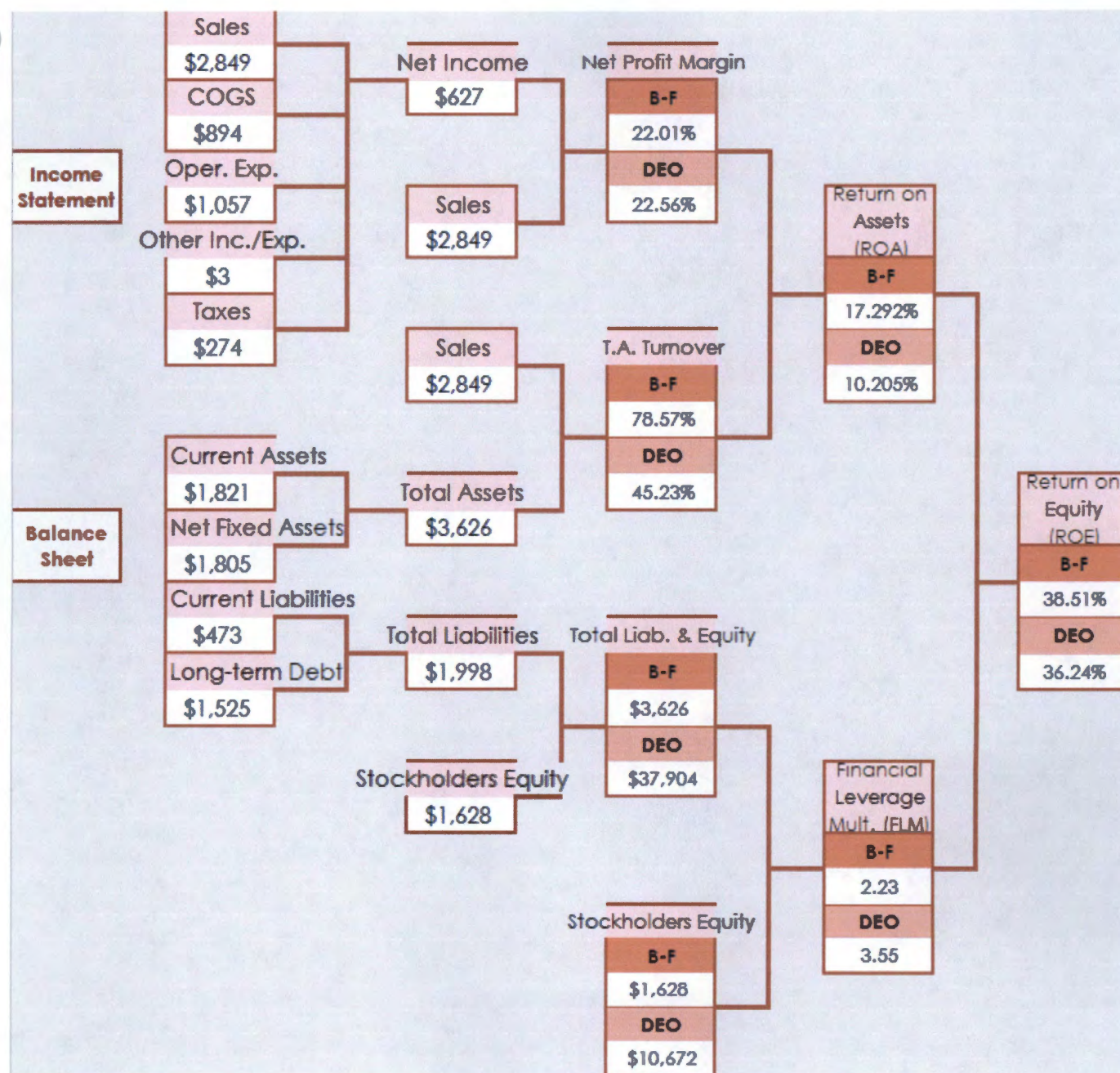
FCF	Growth %
2010	16.25%
2011	-4.72%
2012	-7.44%
2013	-1.79%
2014	18.18%
2015	-7.12%
AVG	1.91%

Valuation	HPR	MM	FCF
Estimated Price	\$107.36	\$ 97.39	\$ 74.41
Weights	0.333333	0.333333	0.333333
Target Price		\$93.05	

Appendix F: DuPont Analysis 2015



Appendix G: DuPont Analysis 2013



Appendix H: Competitor Ratio Comparison

	Today				5 Years Ago			
	Brown Forman (BF.B)	Diageo (DEO)	Anheuser Busch (BUD)	S&P 500	Brown Forman (BF.B)	Diageo (DEO)	Anheuser Busch (BUD)	S&P 500
Cash/Firm Value	8.8%	2.0%	5.9%	11.94	6.90%	8.00%	3.30%	9.67
TAT (Sales/Capital)	0.734	0.44	0.318	N/A	0.731	0.489	0.344	N/A
NPM	22.06	22.82	10.21	8.56	19.87	21.78	12.09	8.51
ROA	16.49%	9.76%	10.89%	2.82%	13.09%	9.68%	3.54%	2.82%
Equity Multiplier	2.198	3.321	2.85	4.46	1.801	3.77	3.24	4.5
ROE (book value)	35.90%	25.72%	16.99%	13.02%	23.69%	34.04%	13.91%	14.27%
ROE (market value)	36.69%	37.72%	31.46%	12.93%	25.50%	41.29%	12.28%	14.27%
Growth rate (g)	5.55%	2.22%	5%	3.00%	9.81%	7.41%	13.83%	3.00%
P/E (ttm)	32.65	20.29	25.31	17.99	-	-	-	19.13
P/E (forward)	27.92%	19.91%	24.24%	17.14	-	-	-	13.45
P/E (average over last 5 years – based on forward EPS)	29.49	NA	NA	16.3	-	-	-	17.02
PEG (based on forward EPS)	5.0306306	8.9684685	4.573585	1.54	-	-	-	1.58
Dividend Yield	1.18%	2.95%	3.06%	2.14	1.38%	3.49%	2.26%	1.88
Payout Ratio	37.46	59.43	33	48.42%				36.24%
M/B	12.88	6.19	4.35	2.73				2.17
P/FCF	43.44			12.9	21.24			19.27
P/Sales	7.03	4.45	4.6	0.0018	4.17			0.0013
EV/EBITDA	20.96	17.18	14.54	11.91%	13.15			9.71%
TIE, coverage ratio.	25.34	4.58	4.48	N/A	30.19	6.37	2.03	N/A
EPS, T12M	3.23	0.95	5.64			0.66	2.91	
Inventory Turnover	1.04	1.05	6.33		1.32	1.29	6.59	

Appendix G: Common Sized Financial Statement

12 Months Ending	Common Sized Balance Sheet			
	FY 2013	FY 2014	FY 2015	Last 12M
	04/30/2013	04/30/2014	04/30/2015	10/31/2015
Revenue	2,849.0	2,991.0	3,134.0	3,106.0
- Cost of Revenue	31.38%	30.52%	30.34%	30.55%
Gross Profit	68.62%	69.48%	69.66%	69.45%
- Operating Expenses	37.10%	37.01%	36.89%	36.19%
Operating Income (Loss)	31.52%	32.46%	32.77%	33.26%
- Non-Operating (Income) Loss	0.84%	0.80%	0.80%	1.06%
Pretax Income (Loss), Adjusted	30.68%	31.66%	31.97%	32.20%
- Abnormal Losses (Gains)	0.32%	0.00%	0.00%	0.00%
Pretax Income (Loss), GAAP	30.36%	31.66%	31.97%	32.20%
- Income Tax Expense (Benefit)	9.62%	9.63%	10.15%	10.24%
Income (Loss) from Cont Ops	20.74%	22.03%	21.83%	21.96%
- Net Extraordinary Losses (Gains)	0.00%	0.00%	0.00%	0.00%
Income (Loss) Incl. MI	20.74%	22.03%	21.83%	21.96%
- Minority Interest	0.00%	0.00%	0.00%	0.00%
Net Income, GAAP	20.74%	22.03%	21.83%	21.96%

12 Months Ending	Common Sized Income Statement		
	FY 2013 04/30/2013	FY 2014 04/30/2014	FY 2015 04/30/2015
Total Assets			
+ ST Investments	0.00%	0.00%	0.00%
+ Notes Receivable, Net	0.00%	0.00%	0.00%
+ Other Inventory	12.58%	12.28%	13.62%
+ Misc ST Assets	5.65%	5.83%	2.53%
Total Current Assets	50.22%	53.06%	53.76%
- Accumulated Depreciation	13.95%	12.87%	13.21%
+ LT Investments & Receivables	0.00%	0.00%	0.00%
+ Misc LT Assets	1.49%	2.02%	2.29%
Total Noncurrent Assets	49.78%	46.94%	46.24%
Total Assets	100.00%	100.00%	100.00%
Liabilities & Shareholders' Equity			
+ Other Payables & Accruals	8.52%	8.12%	8.37%
+ Current Portion of LT Debt	0.06%	0.00%	5.96%
+ Misc ST Liabilities	0.00%	0.00%	0.00%
Total Current Liabilities	13.04%	13.67%	22.85%
+ LT Capital Leases	0.00%	0.00%	0.00%
+ Misc LT Liabilities	1.85%	3.97%	3.70%
Total Noncurrent Liabilities	42.06%	36.80%	31.72%
Total Liabilities	55.10%	50.48%	54.57%
+ Preferred Equity	0.00%	0.00%	0.00%
+ Additional Paid in Capital	1.96%	1.97%	2.36%
- Treasury Stock	21.13%	19.23%	29.29%
+ Retained Earnings	68.95%	70.53%	78.70%
+ Other Equity	-5.82%	-4.58%	-7.15%
Equity Before Minority Interest	44.90%	49.52%	45.43%
+ Minority Interest	0.00%	0.00%	0.00%
Total Equity	44.90%	49.52%	45.43%
Total Liabilities & Equity	100.00%	100.00%	100.00%

	Common Sized Cash Flow Statement			
	FY 2013	FY 2014	FY 2015	Last 12M
12 Months Ending	04/30/2013	04/30/2014	04/30/2015	10/31/2015
Cash from Operating Activities				
+ Net Income	591.0	659.0	684.0	682.0
+ Depreciation & Amortization	51.0	50.0	51.0	53.0
+ Non-Cash Items	12.0	-7.0	49.0	61.0
+ Chg in Non-Cash Work Cap	-117.0	-53.0	-176.0	-97.0
+ Net Cash From Disc Ops	0.0	0.0	0.0	0.0
Cash from Operating Activities	537.0	649.0	608.0	699.0
Cash from Investing Activities				
+ Change in Fixed & Intang	-97.0	-127.0	-125.0	-127.0
+ Net Change in LT Investment	0.0	0.0	0.0	0.0
+ Net Cash From Acq & Div	0.0	0.0	0.0	0.0
+ Other Investing Activities	0.0	0.0	0.0	-1.0
+ Net Cash From Disc Ops	0.0	0.0	0.0	0.0
Cash from Investing Activities	-97.0	-127.0	-125.0	-128.0
Cash from Financing Activities				
+ Dividends Paid	-1,063.0	-233.0	-256.0	-262.0
+ Cash From (Repayment) Debt	493.0	3.0	183.0	669.0
+ Cash (Repurchase) of Equity	1.0	-39.0	-444.0	-988.0
+ Other Financing Activities	-7.0	-19.0	-14.0	-13.0
+ Net Cash From Disc Ops	0.0	0.0	0.0	0.0
Cash from Financing Activities	-576.0	-288.0	-531.0	-594.0
Effect of Foreign Exchange Rates	2.0	-1.0	-19.0	-17.0
Net Changes in Cash	-134.0	233.0	-67.0	-40.0
Cash Paid for Taxes	252.0	281.0	375.0	
Cash Paid for Interest	32.0	28.0	27.0	
Reference Items				
EBITDA	949.0	1,021.0	1,078.0	1,086.0
Trailing 12M EBITDA Margin	33.31	34.14	34.40	34.96
Net Cash Paid for Acquisitions	—	—	—	
Tax Benefit from Stock Options	17.0	10.0	18.0	14.0
Free Cash Flow	442.0	521.0	487.0	573.0
Free Cash Flow to Firm	466.6	539.1	505.4	596.9
Free Cash Flow to Equity	935.0	526.0	670.0	1,242.0
Free Cash Flow per Basic Share	2.07	2.44	2.30	2.72
Price to Free Cash Flow	34.03	36.76	39.20	34.42
Cash Flow to Net Income	0.91	0.98	0.89	0.07